

# ISH<sup>®</sup> (Vertical Type)

耐高温・耐振動性に優れた垂直嵌合SMTコネクタ

Product Specifications:		Single-row	Double-row
Pitch (mm max.)		2.0	
Contact Size (mm)		0.5 × 0.4(020)	
Mated Height (mm max.)		(ISH)20.75, (ISHV)19.95	
Width formula (mm)		(ISH)7.6+1.0*?pin, (ISHV)10.5+1.0*?pin	
Operating Temperature		-40 - 125°C	
Vibration Resistance		10G	
Current Rating		4.5A per pin	
Voltage Rating		100V	
Withstand Voltage		AC 1000V/minute	
Plating		Sn	
Housing		Male:glass-filled LCP, Female:PBT	
Pin counts	Range	Up to 20	Up to 40
	Available	-	8*, 10, 20, 26

#### Applicable Cable Size:

AWG#22,#20  
\*Insulation Diameter 1.6 mm max.

#### Applicable Standards (Reference Only):

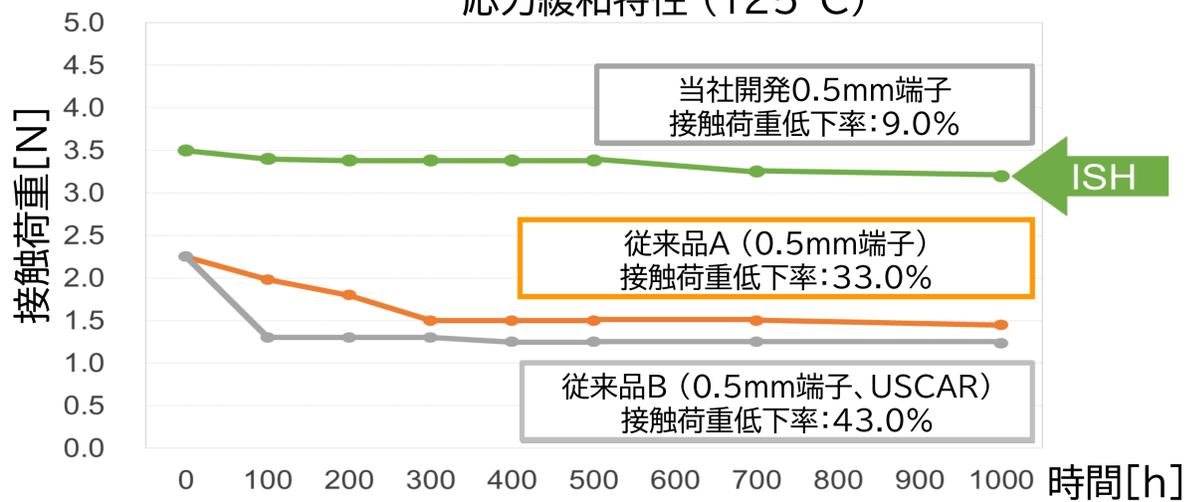
LV214 : 8P (optional)

\*記載のない極数の対応状況についてはお問い合わせください。  
\*ISH V シリーズ対応:8P



## ▶ 高い接触信頼性を求める機器に最適な優れた耐高温性・耐振動性

応力緩和特性 (125°C)



## ▶ 独自のバネ構造端子による高い長期接触信頼性



## ▶ LV214規格準拠、高温・振動環境の産業用途等に最適

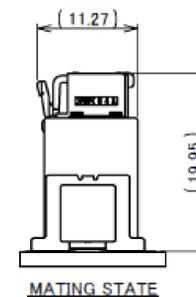
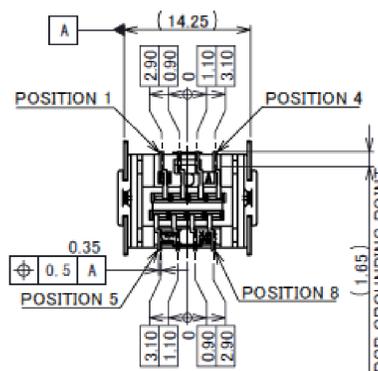
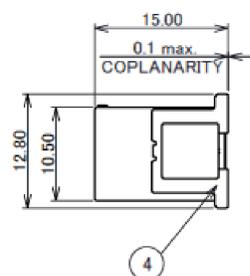
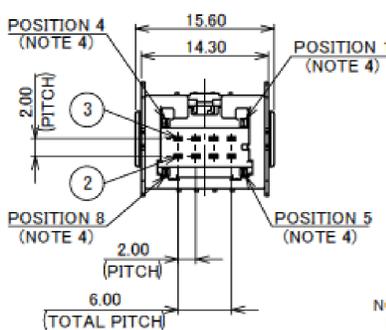
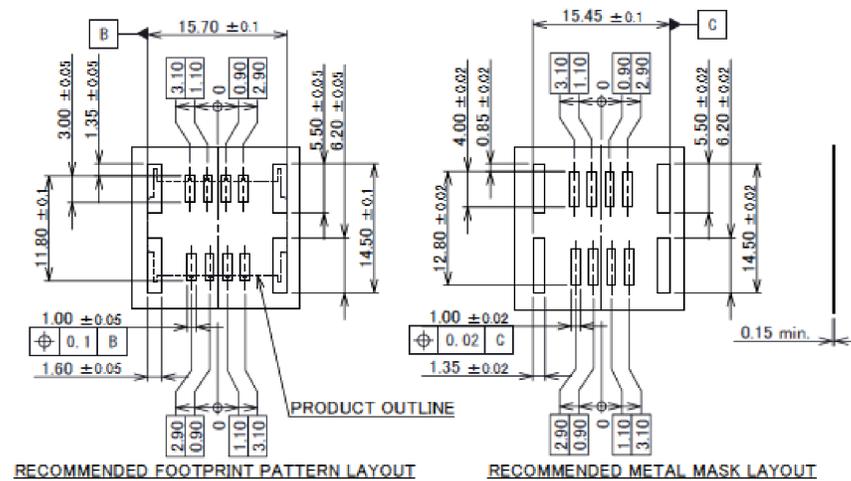
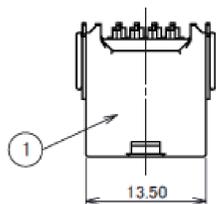


- ヘッドライト
- インバータ & DC/DC コンバータ
- バッテリーコントロールモジュール
- リアカメラモジュール
- 車載インフォテインメント
- ロボット部品
- 工場自動化装置

# Component Parts Details

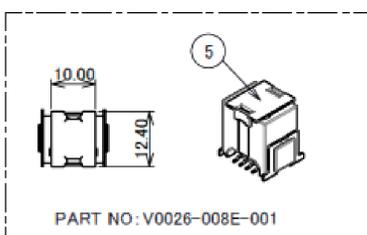
## ISH® (Vertical Type) MALE (8P) ※ISHV:

MALE CONNECTOR	
PART NO.	VACUUM CAP
V0026-008E-001	WITH
◆V0026-008E-002	WITHOUT
◆MARK MEANS NOT AVAILABLE.	



- NOTES
1. APPLICABLE PART NO.:
    - FEMALE HOUSING...V0027-91008-211
    - FEMALE RETAINER...V0116-92008-01
    - FEMALE TERMINAL...VT009-02
  2. COMPLY WITH ELV/RoHS
  3. USE METAL MASK WHICH HAS A THICKNESS OF 0.15mm MIN. WHEN THE MALE CONNECTOR IS MOUNTED ON THE PCB.
  4. POSITION NUMBERS ARE INDICATED.

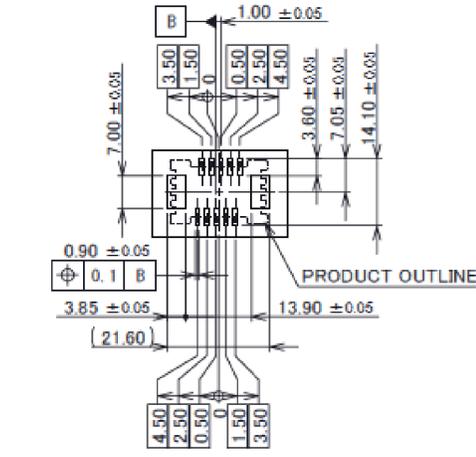
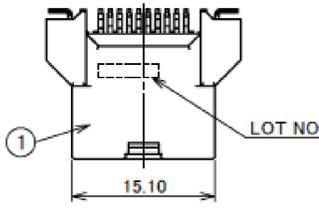
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
5	VACUUM CAP	GLASS-FILLED LCP	NATURAL
4	HOLD DOWN	BRASS	S <sub>n</sub> REFLOW
3	MALE TERMINAL-2	BRASS	S <sub>n</sub> REFLOW
2	MALE TERMINAL-1	BRASS	S <sub>n</sub> REFLOW
1	MALE HOUSING	GLASS-FILLED LCP	BLACK/UL94V-0



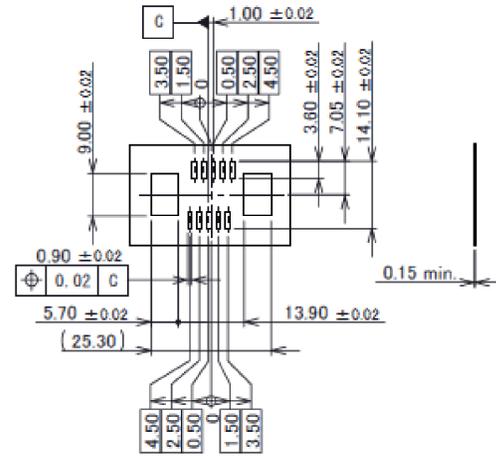
# ISH® (Vertical Type) MALE (10P):

PART NO.	VACUUM CAP
V0019-010E-001	WITH
◆V0019-010E-002	WITHOUT

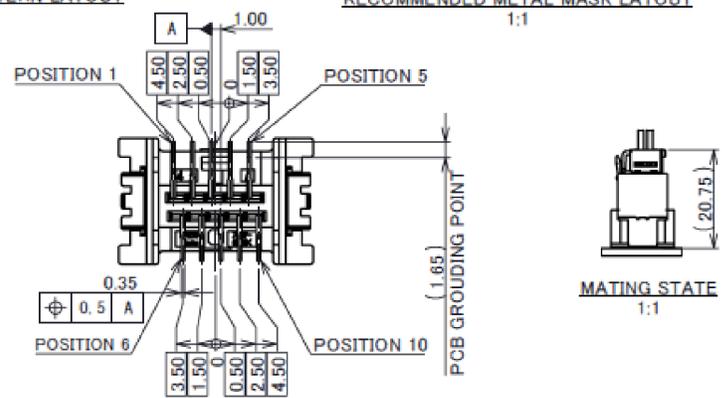
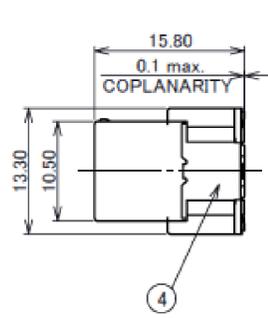
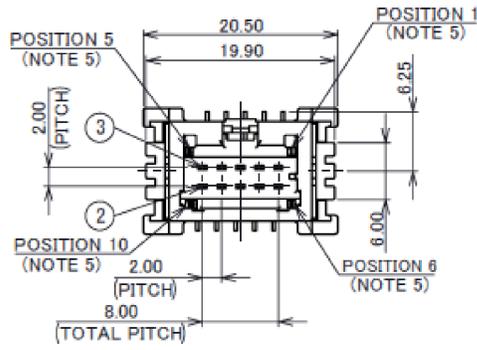
◆MARK MEANS NOT AVAILABLE



RECOMMENDED FOOTPRINT PATTERN LAYOUT 1:1



RECOMMENDED METAL MASK LAYOUT 1:1

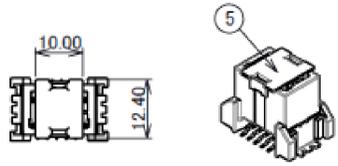


MATING STATE 1:1

### NOTES

- APPLICABLE PART NO.:
  - FEMALE HOUSING...V0020-91010-211
  - FEMALE RETAINER...V0020-92010-211
  - FEMALE TERMINAL...VT009-02
- COMPLY WITH ELV/RoHS
- HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL(HDM-0020)
- USE METAL MASK WHICH HAS A THICKNESS OF 0.15mm MIN. WHEN THE MALE CONNECTOR IS MOUNTED ON THE PCB.
- POSITION NUMBERS ARE INDICATED.

NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
5	VAGUUM CAP	GLASS-FILLED LCP	NATURAL
4	HOLD DOWN	BRASS	Sn REFLOW
3	MALE TERMINAL-2	BRASS	Sn REFLOW
2	MALE TERMINAL-1	BRASS	Sn REFLOW
1	MALE HOUSING	GLASS-FILLED LCP	BLACK / UL94V-0

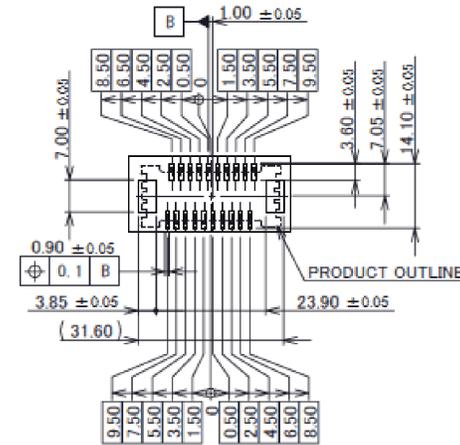
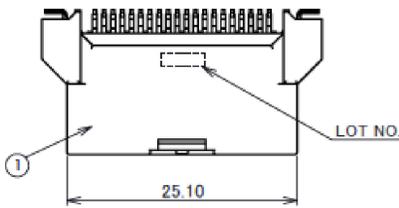


PART NO: V0019-010E-001

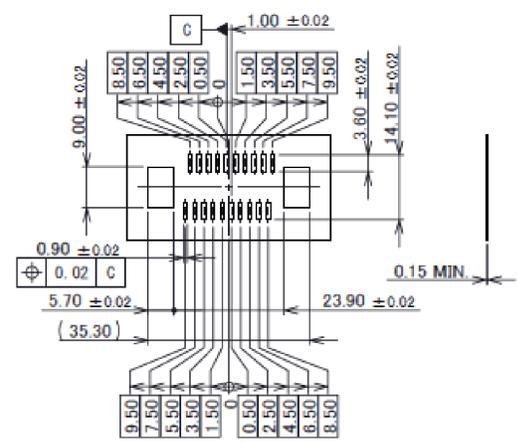
Rev.0

# ISH® (Vertical Type) MALE (20P):

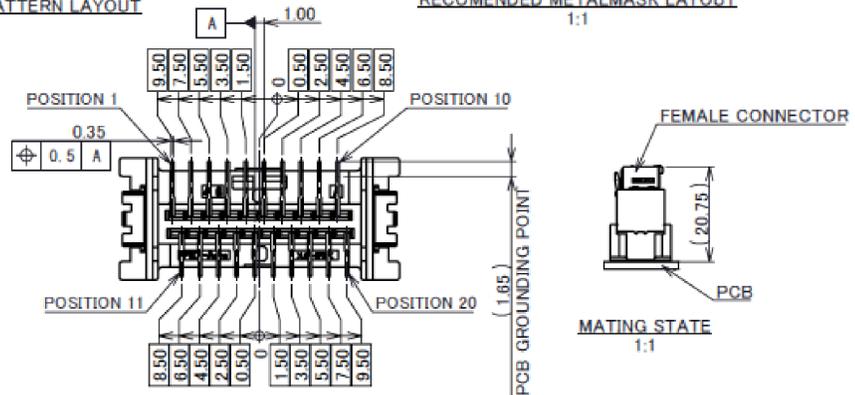
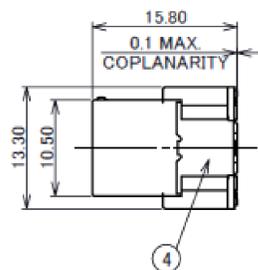
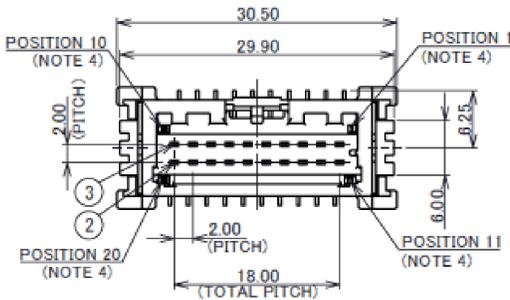
PART NO.
V0019-020E-001
V0019-020E-002



RECOMENDED FOOTPRINT PATTERN LAYOUT 1:1



RECOMMENDED METALMASK LAYOUT 1:1

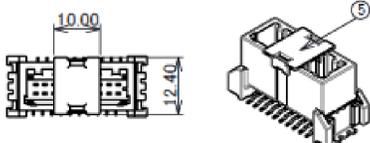


MATING STATE 1:1

### NOTES

- APPLICABLE PART NO.:
  - FEMALE HOUSING...V0020-91020-211
  - FEMALE RETAINER...V0020-92020-211
  - FEMALE TERMINAL...VT009-02
- COMPLY WITH ELV/RoHS
- USE METAL MASK WHICH HAS A THICKNESS OF 0.15mm MIN. WHEN THE MALE CONNECTOR IS MOUNTED ON THE PCB.
- POSITION NUMBERS ARE INDICATED.

NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
5	VACUUM CAP	GLASS-FILLED LCP	NATURAL
4	HOLD DOWN	BRASS	Sn REFLOW
3	MALE TERMINAL-2	BRASS	Sn REFLOW
2	MALE TERMINAL-1	BRASS	Sn REFLOW
1	MALE HOUSING	GLASS-FILLED LCP	BLACK/UL94V-0



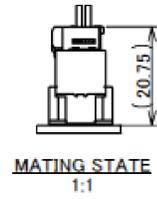
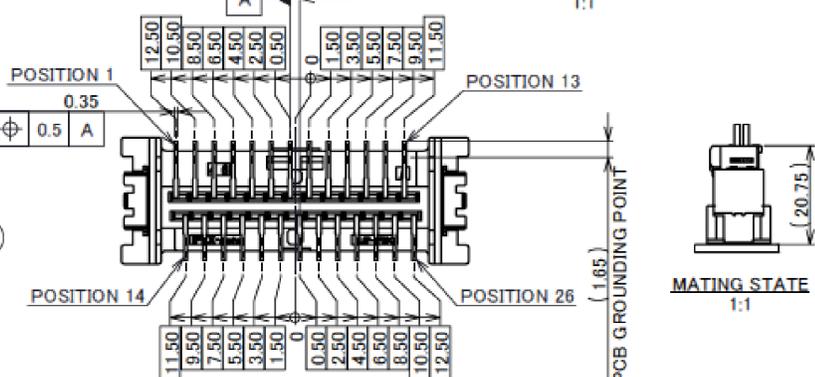
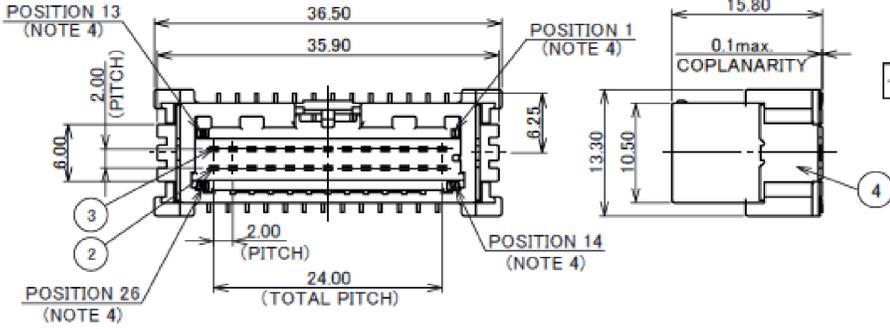
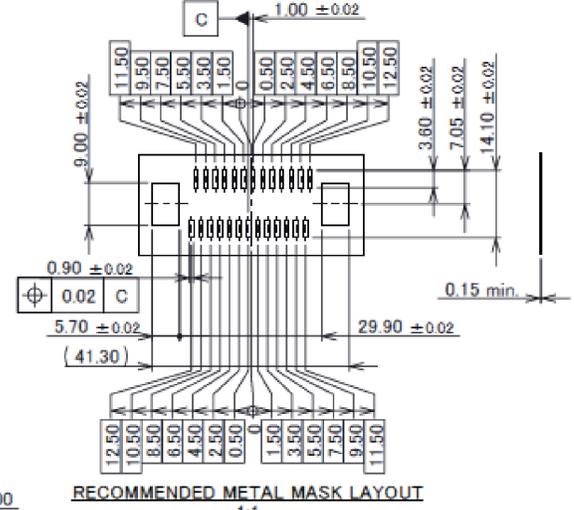
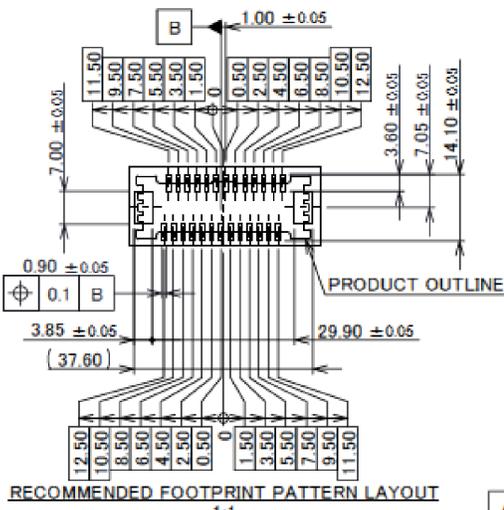
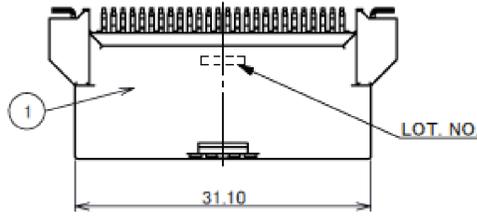
PART NO:V0019-020E-001

Rev.0

# ISH® (Vertical Type) MALE (26P):

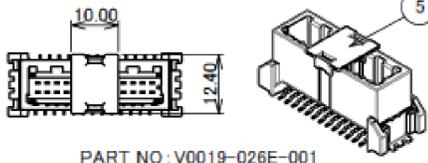
PART NO.	VACUUM CAP
◆V0019-026E-001	WITH
V0019-026E-002	WITHOUT

◆MARK MEANS NOT AVAILABLE.



- NOTES
1. APPLICABLE PART NO.:
    - FEMALE HOUSING --- V0020-91026-211
    - FEMALE RETAINER --- V0020-92026-211
    - FEMALE TERMINAL --- VT009-02
  2. COMPLY WITH ELV/RoHS
  3. USE METAL MASK WHICH HAS A THICKNESS OF 0.15mm MIN. WHEN THE MALE CONNECTOR IS MOUNTED ON THE PCB.
  4. POSITION NUMBERS ARE INDICATED.

NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
5	VACUUM CAP	GLASS-FILLED LCP	NATURAL
4	HOLD DOWN	BRASS	Sn REFLOW
3	MALE TERMINAL-2	BRASS	Sn REFLOW
2	MALE TERMINAL -1	BRASS	Sn REFLOW
1	MALE HOUSING	GLASS-FILLED LCP	BLACK

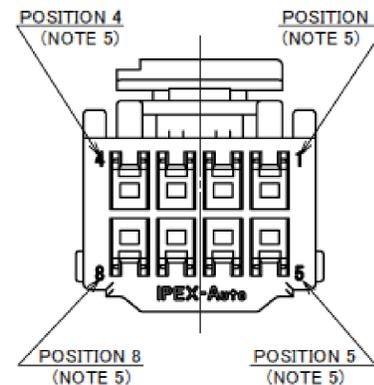
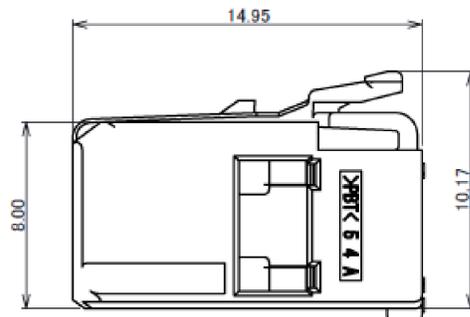
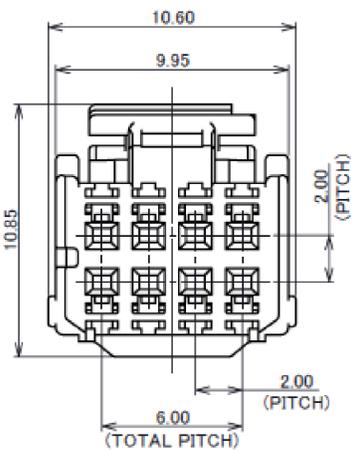
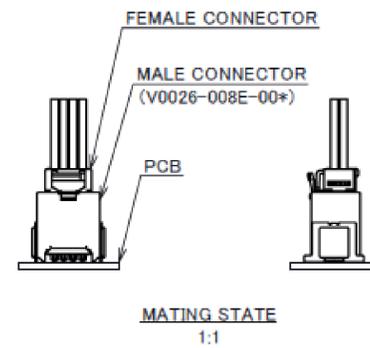
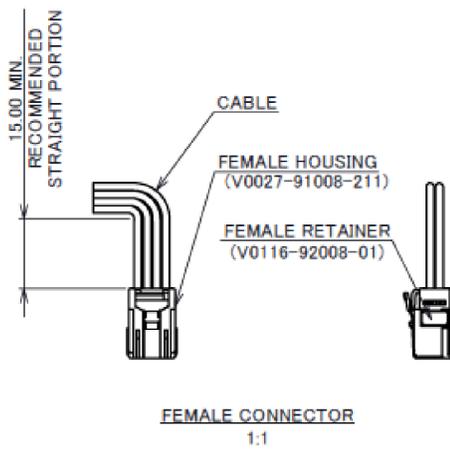
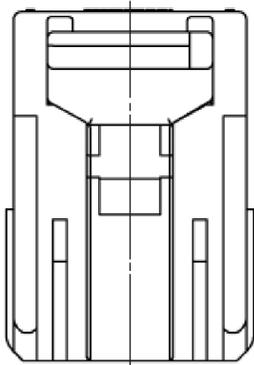


PART NO: V0019-026E-001

Rev.0

# ISH® (Vertical Type) FEMALE (8P) ※ISHV :

PART NO.	LOCK TYPE	KEY CODING	COLOR	FOR REAR COVER
V0027-91008-211	NORMAL ROCK	-	BLACK	N/A



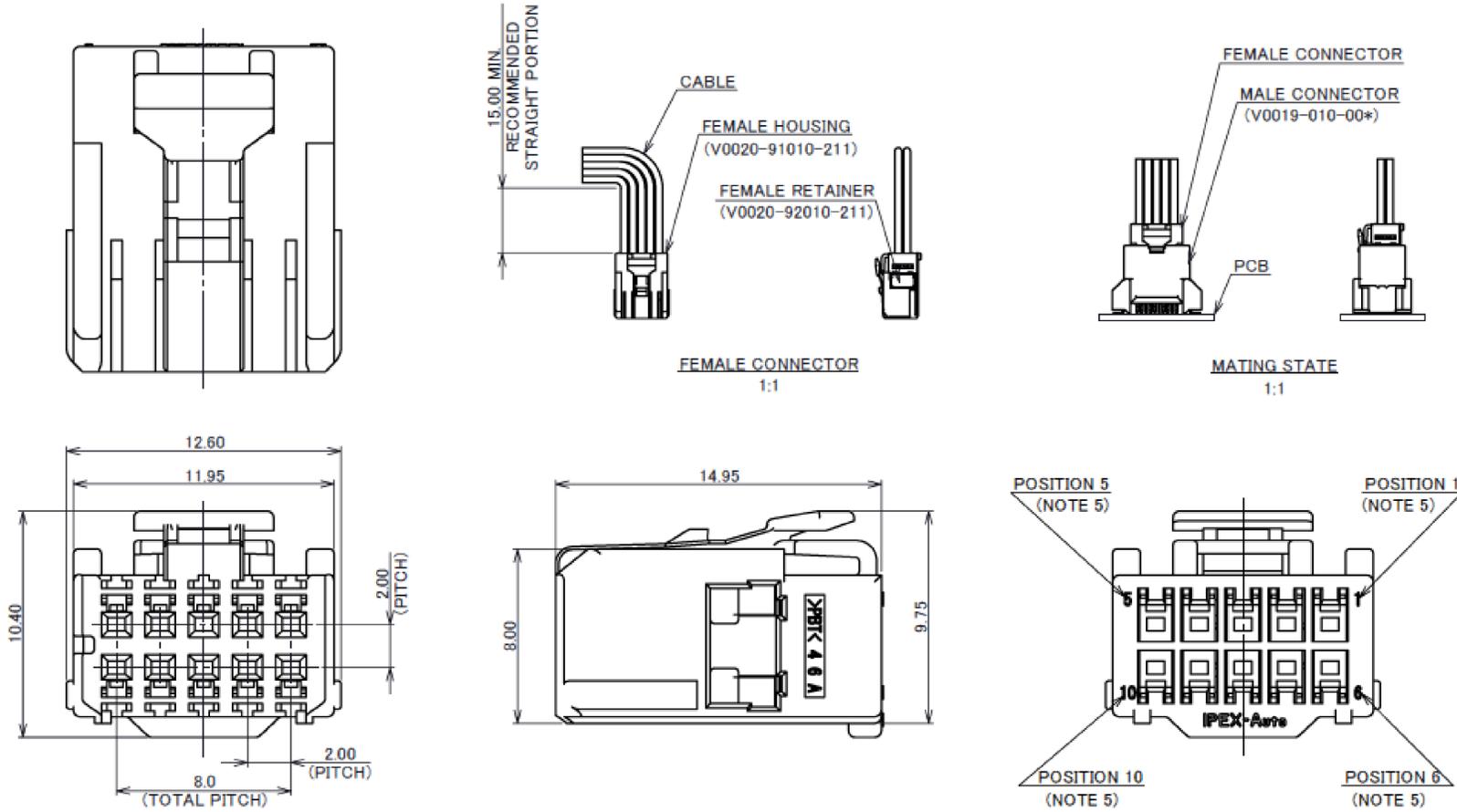
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
1	FEMALE HOUSING	PBT	BLACK

- NOTES
1. APPLICABLE PART NO.:
    - FEMALE TERMINAL --- VT009-02
    - FEMALE RETAINER --- V0116-92008-01
  2. MATERIAL: PBT
  3. COMPLY WITH ELV/RoHS
  4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]
  5. POSITION NUMBERS ARE INDICATED.

Rev.0

# ISH® (Vertical Type) FEMALE (10P):

PART NO.	LOCK TYPE	KEY CODING	COLOR	FOR REAR COVER
V0020-91010-211	NORMAL LOCK	-	BLACK	N/A



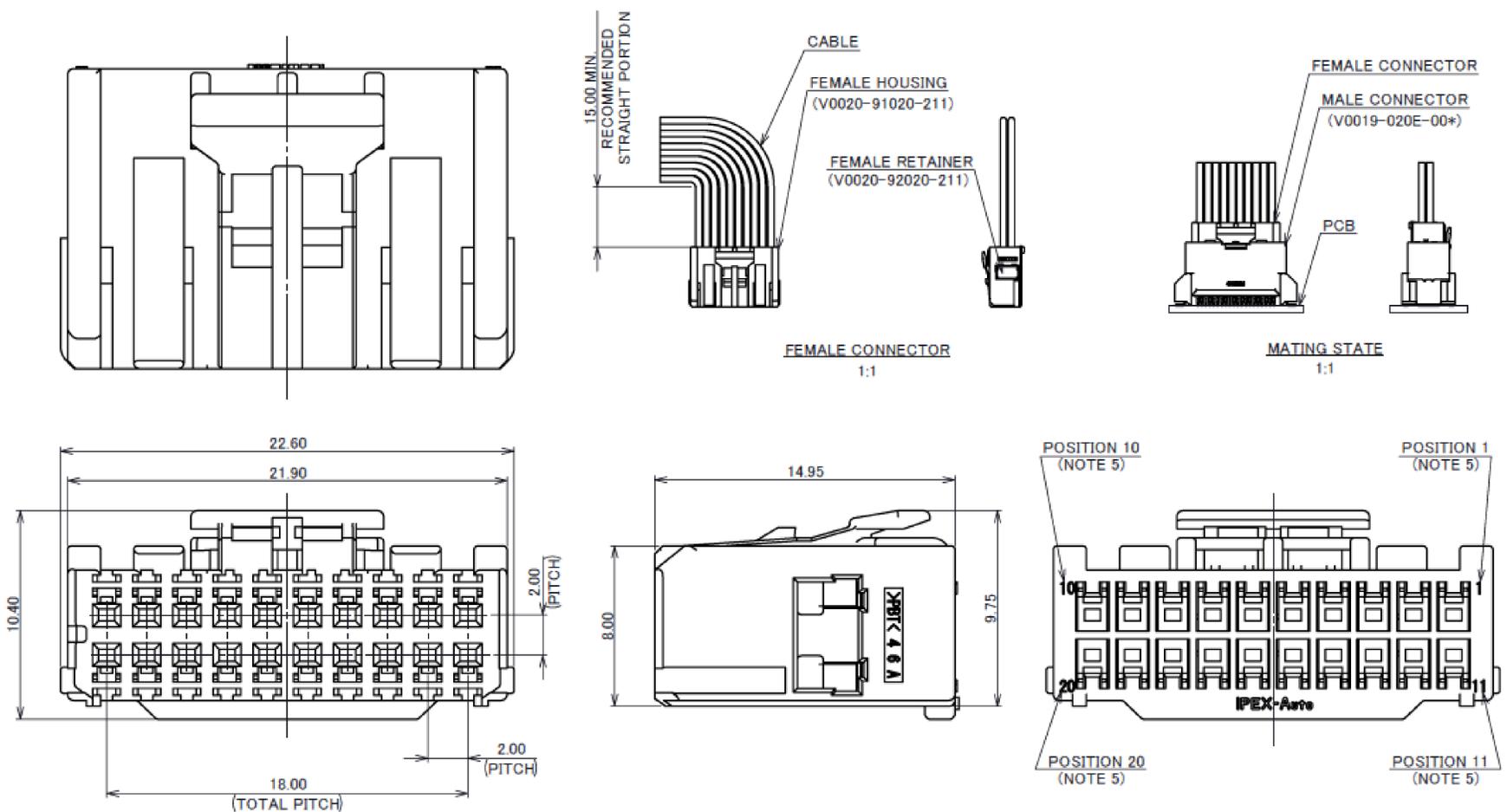
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
①	FEMALE HOUSING	PBT	BLACK

- NOTES
- APPLICABLE PART NO.:  
 - FEMALE TERMINAL --- VT009-02  
 - FEMALE RETAINER --- V0020-92010-211
  - MATERIAL: PBT
  - COMPLY WITH ELV/REHS.
  - HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]
  - POSITION NUMBERS ARE INDICATED.

Rev.0

# ISH® (Vertical Type) FEMALE (20P):

PART NO.
V0020-91020-211



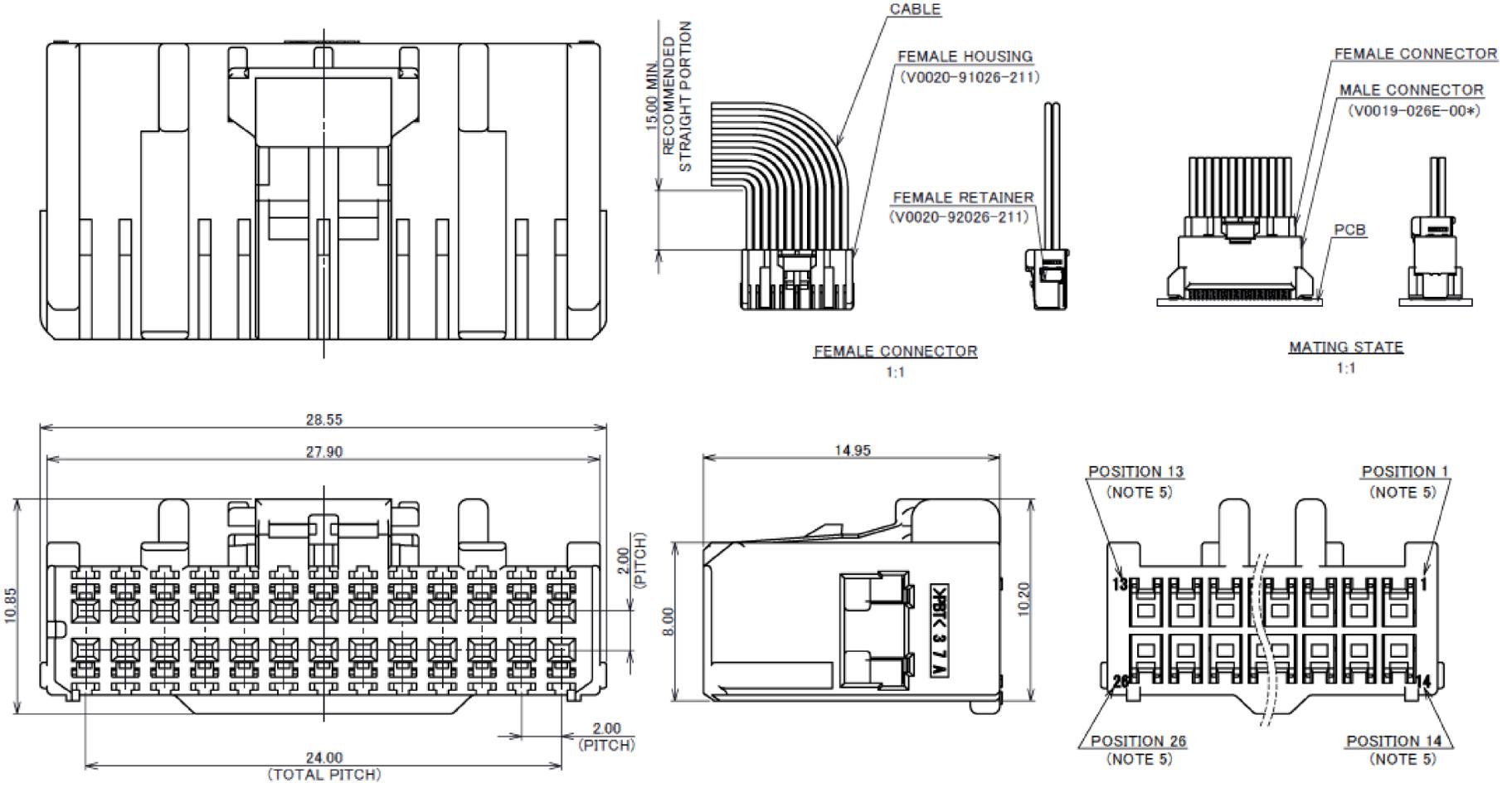
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
1	FEMALE HOUSING	PBT	BLACK

- NOTES
- APPLICABLE PART NO.:  
 - FEMALE TERMINAL --- VT009-02  
 - FEMALE RETAINER --- V0020-92020-211
  - MATERIAL: PBT
  - COMPLY WITH ELV/REHS.
  - HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]
  - POSITION NUMBERS ARE INDICATED.

Rev.0

# ISH® (Vertical Type) FEMALE (26P):

PART NO.
V0020-91026-211



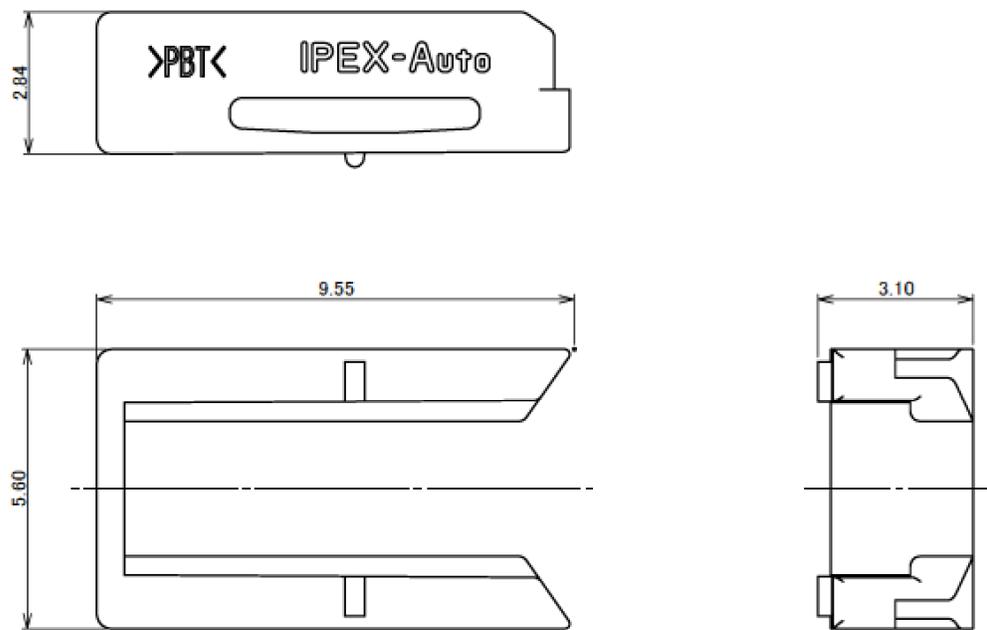
1	FEMALE HOUSING	PBT	BLACK
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS

- NOTES
1. APPLICABLE PART NO.:  
 - FEMALE TERMINAL --- VT009-02  
 - FEMALE RETAINER --- V0020-92026-211
  2. MATERIAL: PBT
  3. COMPLY WITH ELV/RoHS.
  4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]
  5. POSITION NUMBERS ARE INDICATED.

Rev.0

# ISH® (Vertical Type) FEMALE RETAINER (8P) ※ISHV :

PART NO.
V0116-92008-01



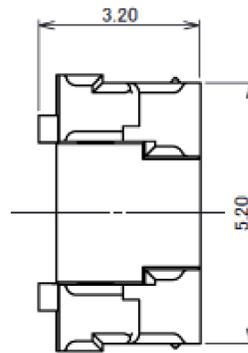
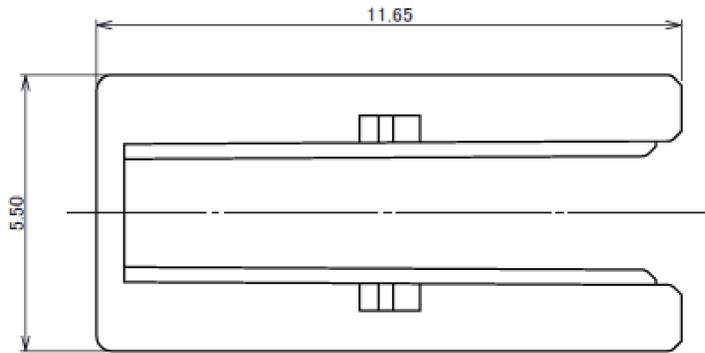
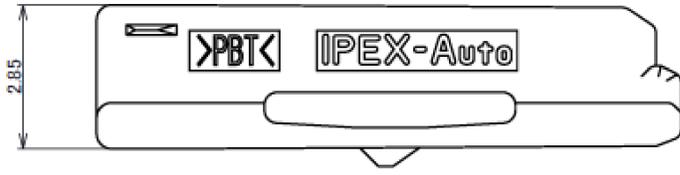
- NOTES
1. APPLICABLE PART NO.:  
 - FEMALE HOUSING --- V0116-91008-\*\*  
 V0027-91008-211
  2. MATERIAL: PBT
  3. COMPLY WITH ELV/RoHS.
  4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]

1	FEMALE RETAINER	PBT	BLACK
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS

Rev.0

# ISH® (Vertical Type) FEMALE RETAINER (10P):

PART NO.
V0020-92010-211



**NOTES**

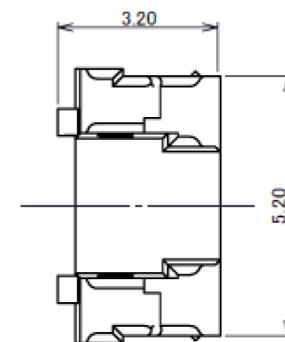
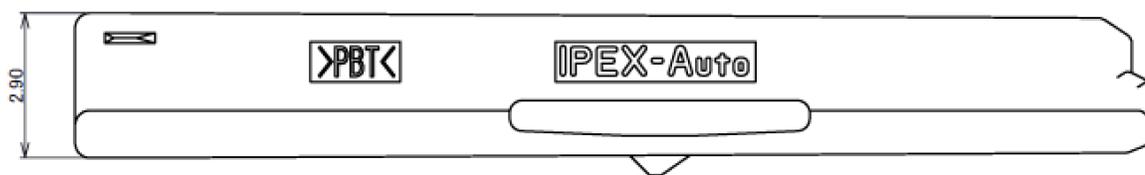
1. APPLICABLE PART NO.:  
-FEMALE HOUSING- V0020-91010-211
2. MATERIAL: PBT
3. COMPLY WITH ELV/RoHS.
4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]

1	FEMALE RETAINER	PBT	BLACK
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS

Rev.0

# ISH® (Vertical Type) FEMALE RETAINER (20P):

PART NO.
V0020-92020-211



**NOTES**

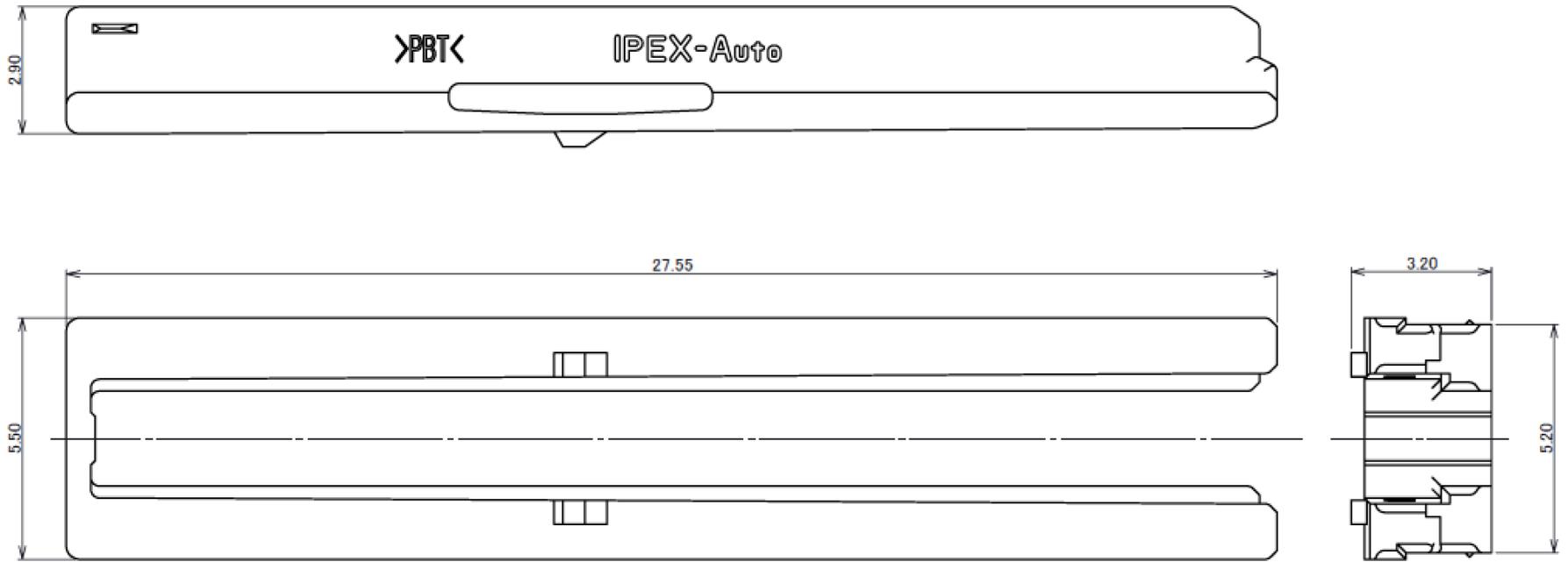
1. APPLICABLE PART NO.:  
-FEMALE HOUSING- V0020-91020-211
2. MATERIAL: PBT
3. COMPLY WITH ELV/RoHS
4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]

1	FEMALE RETAINER	PBT	BLACK
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS

Rev.0

# ISH® (Vertical Type) FEMALE RETAINER (26P):

PART NO.
V0020-92026-211



## NOTES

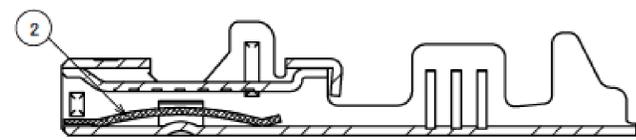
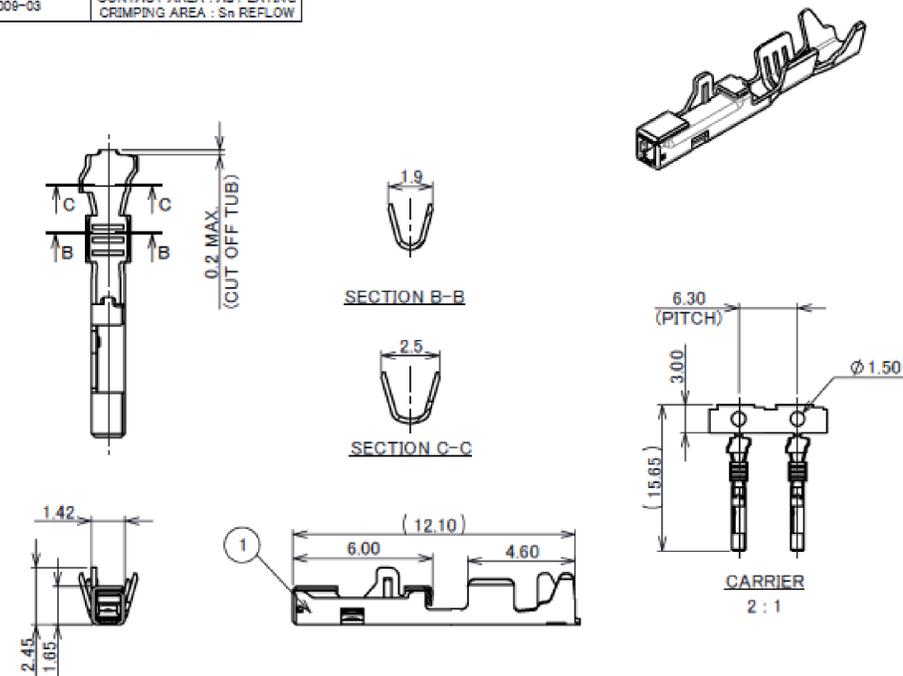
1. APPLICABLE PART NO.:  
\*FEMALE HOUSING\* V0020-91026-211
2. MATERIAL: PBT
3. COMPLY WITH ELV/RoHS
4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]

NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
1	FEMALE RETAINER	PBT	BLACK

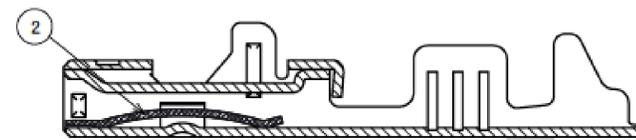
Rev.0

# ISH® (Vertical Type) TERMINAL:

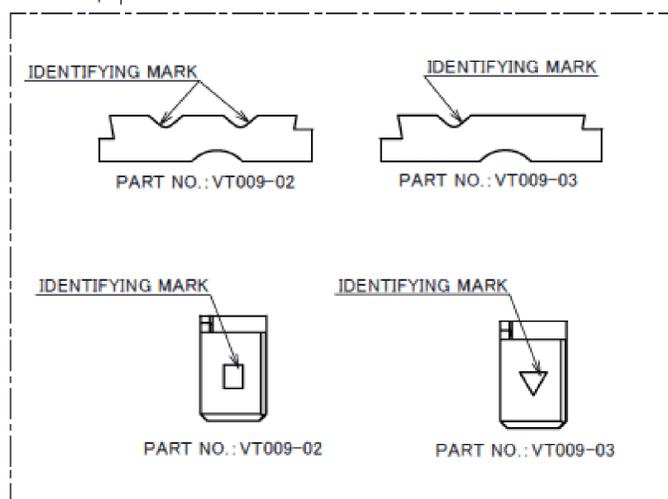
PART NO.	PLATING
VT009-02	Sn REFLOW
VT009-03	CONTACT AREA : Au PLATING CRIMPING AREA : Sn REFLOW



PART NO.: VT009-02



PART NO.: VT009-03  
SECTION A-A  
10 : 1



## NOTE

1. APPLICABLE FEMALE HOUSING: ISH CONNECTOR SERIES
2. APPLICABLE CABLE SIZE: 0.3mm<sup>2</sup> / 0.5mm<sup>2</sup> (FINISHED  $\phi$  1.60mm MAX.)
3. COMPLY WITH ELV/RoHS.
4. TERMINAL CRIMP SPECIFICATION MUST BE COMPLIANT WITH HANDLING MANUAL [HDM-0020].

2	SPRING	COPPER ALLOY	VT009-02 PLATING : Sn REFLOW VT009-03 PLATING : Au PLATING
1	BODY	BRASS	VT009-02 PLATING : Sn REFLOW VT009-03 PLATING : Au PLATING CONTACT AREA : Au PLATING CRIMPING AREA : Sn REFLOW
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS

Rev.0

# Custom Products Available

## RF Connector

MHF® series



## Micro-coaxial/Twinax/Discrete Wire Connector

CABLIN® series

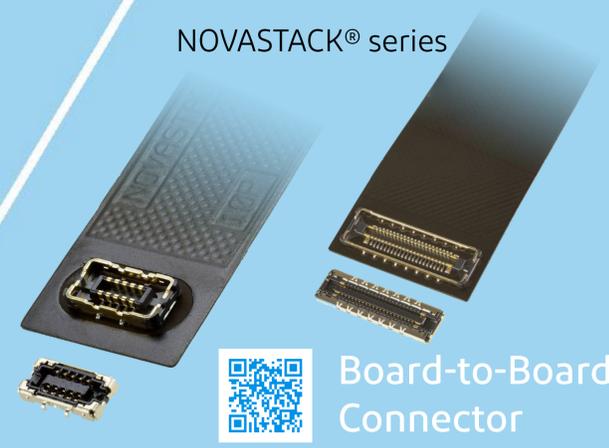


## Optical Module

LIGHTPASS® series



NOVASTACK® series



## Board-to-Board Connector



## Power Connector/Terminal

AP series

ISH® series



MINIFLEX® series

EVAFLEX® series



## FPC FFC Connector



Inquiry



MINIDOCK® series



## I/O Connector

I-PEX, MHF, CABLINE, LIGHTPASS, NOVASTACK, ISH, IARPB, MINIFLEX, EVAFLEX, MINIDOCKS and ZenShield are registered trademarks of I-PEX Inc. Please note that the contents in the catalog might be changed without prior notification. I-PEX Inc. assumes no responsibility for any inaccuracies or obligation to update information on these documents. Please be sure to read and understand the latest "Precautions for Use" and "Instruction Manual" before you use our products. We shall not be responsible for any defects, damages or troubles in case you use our products without following the precautions for use. Please feel free to contact our sales representatives when you use our products for any applications that require very high reliability and safety, or that relate to human life (ex. nuclear power control, aerospace, transportation, medical equipment, safety equipment etc.).

Contact your sales representative or more detailed information.

[www.i-pex.com](http://www.i-pex.com)



# I-PEX

© I-PEX Inc. 2024  
All rights reserved